From Big Data to Better Data:
Measure what Matters

Rachel Stone
Utah Governor's Office of Management and Budget

Dear Rachel,

Did you know that we have available information? There's loads of it, and we bet it's something groundbreaking that you don't know.

Also, we made the old information prettier and more user friendly.

It's the most innovative out there, and everybody's using it. You had better use it too, or you'll be out of the loop.

Unless you acquire it, you'll fall short of your goals. P.S. We have a conference in Silicon Valley that you can get away from work to go to…

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CURRENT STATE OF THE ECONOMY

Consumer Confidence

A measure of confidence among American households fell for a second consecutive month, weighed down by weaker expectations for economic growth and heightened market volatility. The Conference Board reported that its index of U.S. consumer confidence dropped to 128.1 in December, down from 136.4 in November.

State of Business

Business investment may have slowed down considerably in the fourth quarter, according to recent estimates from the Commerce Department. Excluding defense and aircraft purchases, core durable goods spending fell by a 0.6 percent monthly seasonally adjusted rate in November.

Consumer Spending

Consumer spending posted solid gains for November, keeping the spending outlook positive for the fourth quarter of 2018. According to the Commerce Department, personal consumption expenditures increased 0.4 percent in November from October.

Travel Trends Index

The latest Travel Trends Index (TTI) reported that international inbound travel—which had a strong showing of 3.8 percent year-over-year growth in November—is projected to fizzle in the first half of 2019, dropping down to just one percent growth by May 2019.

November Travel Trends Index
Current Travel Index and Leading Travel Index

Nonfarm Payroll Employment

Labor

Job creation ended 2018 on a powerful note, with nonfarm payrolls surging by 312,000 in December, though the unemployment rate rose to 3.9 percent as reported by the Bureau of Labor Statistics. The jobless rate, which was last higher in June, rose for the right reason as 419,000 new workers entered the workforce and the labor force participation rate increased to 63.1 percent.

Impressions & Clicks
Impressions Clicks

Impressions and Click-thru
Impressions CTR

Creative Performance

⊕ Creative Name	# Impressions ↓	Clicks	# CTR
UMC_Social_Ads_10	65,315	599	0.92 %
UMC Social Ads-10	32,099	229	0.71 %
UMC_Social_Ads_2	19,523	204	1.04 %
Happier 1200x680	18,252	94	0.52 %
Total	**255,393**	**2,167**	**0.85 %**

1 - 16 of 16 items

Social Performance

Effect of Paid on Earned
Impressions Clicks Social Action

Social Impressions	Social Reach
255,393	223,837

Social Action	Post Engagement
713	3,754

Frequency
1.18

GIS
Customer Satisfaction Surveys
Compliance Rates
Demographic Information
Website Hits
Turnover Rates
Longitudinal Studies
Federal Reporting Reqs
Machine Learning
Revenue
Statistical Analysis
Evidence-Based Practices
Economic Modeling
Customer Volume

Audit Findings
Personally Identifiable Information
Performance Dashboard
Predictive Analysis
Artificial Intelligence
Timeliness of Delivery
Hours Worked
Cost per
Cost avoidance
Reliability Rates
Workload Sizes
Industry Ratings, Awards
Public Opinion Poll
Third Party Evaluation

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Shortage

Available
Information/Data

Available
Time and Attention
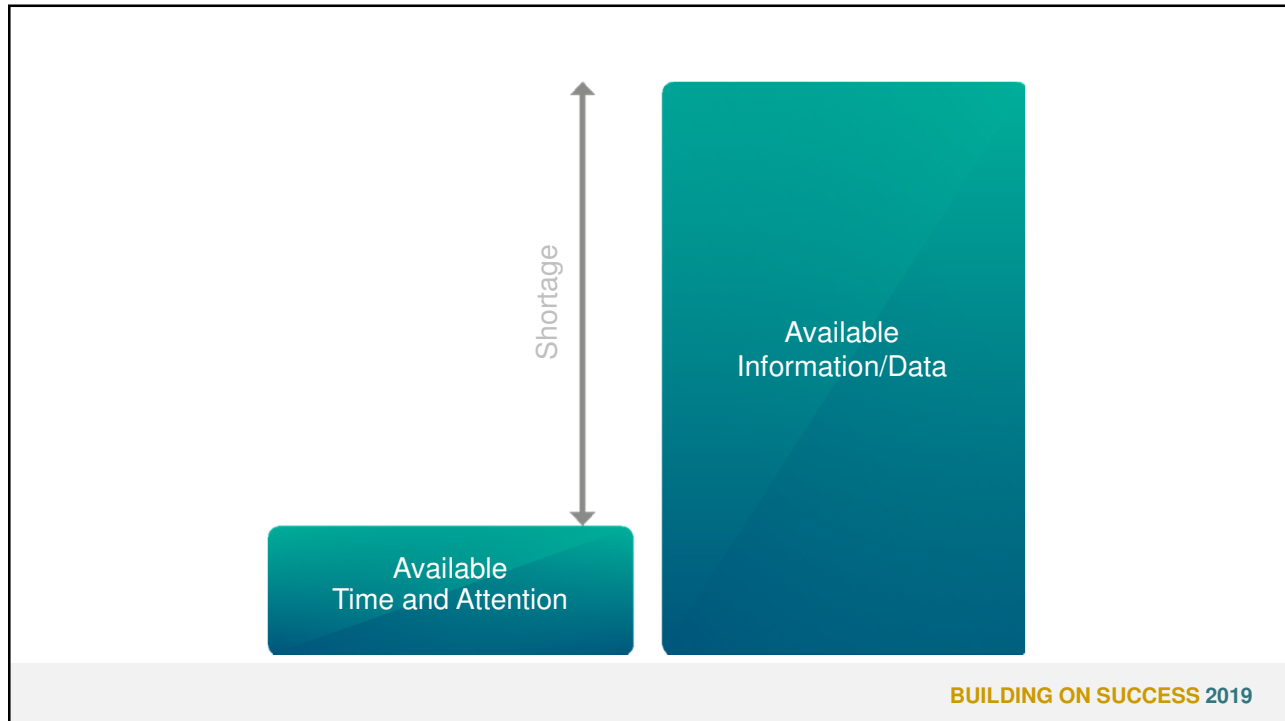
In an era of big data,
less is more.

The Seductive Seven: More Data

Illusion:

We believe that the more data we have, the more we believe we will uncover reality and deepen our understanding.

Right Mindset:

Too much data breeds confusion. Data can be useful when you know what you are trying to answer.

What is your goal?

Show me how you measure me,
and I'll show you how I behave.
Eli Goldratt

The Right Performance Measures

- Align resources, actions and behaviors towards the goal
- Help us understand how the system is performing over time, and when intervention or change is necessary
- Tell us how we are doing today
- Identify improvement opportunities

Hierarchy of Measures

SYSTEM

PROCESS

INDIVIDUAL

TYPES OF MEASURES
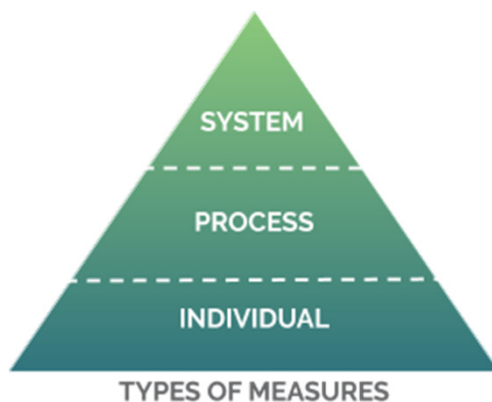
To what end do we exist?
Are we achieving that goal?

Which means best achieves that goal? Is our process functioning? What should change?

How are we each contributing to the goal?

System Measure

QT
̶
OE

The equation **Q × T ÷ OE** is a universal formula to capture the performance over time of any system of work in government.

Its parts are:

T Throughput, or units of work completed (#)

Q Quality, or effectiveness of the work completed (%)

OE Operating Expenses, or total cost of operating the system ($)

System Measure

QT
̶
OE

The equation **Q × T ÷ OE** captures the outputs a system produces today, but once only results in an almost-meaningless decimal….

.000021658

This ratio is only helpful when viewed in the context of a trend.

QT/OE encourages us to improve against our historic performance.

It compares ongoing performance trends to those of a baseline period. Improve the trend by influencing quality, then speed to maximize taxpayer dollars. **Quality is the utmost indicator for whether a system is meeting its ultimate goal.**
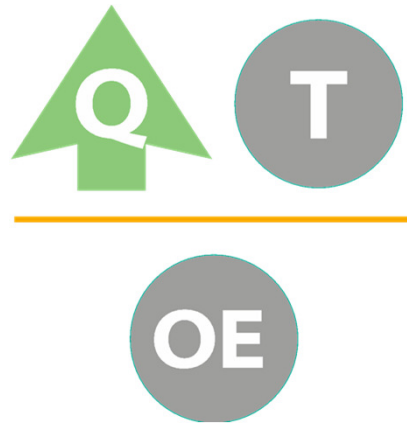
Is this System Performing Well?

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Is this System Performing Well?

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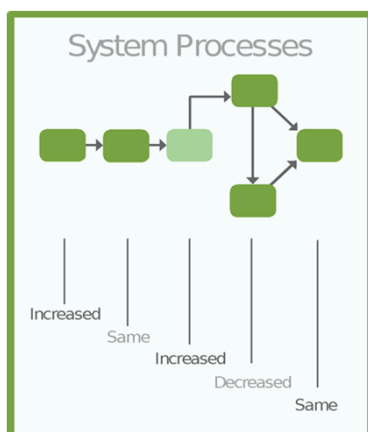Is this System Performing Well?

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Is this System Performing Well?

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Is this System Performing Well?

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Invert to calculate unit cost, or "cost per"

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"*Over the past 18 months we have improved our reliability by 34% (quality measure), while absorbing 18% more workload (throughput) for the same costs (operating expenses).*"

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Process Measures

Focus on improving process flow and quality of work

Help us know how we are doing today

Correspond to Rules of Flow:
- Triage
- Full Kit
- WIP
- Synchronization
- Mistake Proof
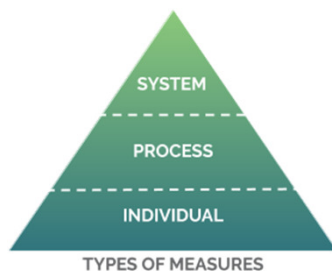- Standard Work

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Individual Measures

Individual reflections of system and process measures

- Caseload sizes
- Services provided
- Measures of flow

The Division to Help Utahns

SYSTEM

PROCESS

INDIVIDUAL

TYPES OF MEASURES

System Measure:
Throughput: *# of Utahns helped monthly*
Quality: *% of Utahns achieved their desired outcome*
Expenses: *$500,000/mo direct and overhead*

Process Measures:
Time elapsed- help requested until delivery
% of time spent helping vs. other activities

Individual Measures:
# of Utahns helped weekly,
% help delivered fully (no rework in 10 days)

How to Measure Quality

$$\longrightarrow \quad \frac{QT}{OE}$$

Quality measures are often the most difficult to identify

For long-term quality outcomes, a leading or proximate measure is often necessary

Improving the quality portion of the ratio is almost always the focus of improvement efforts (typically we don't control system volume or demand).

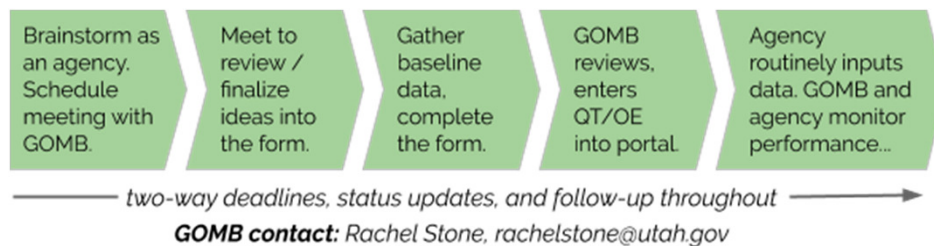**BUILDING ON SUCCESS 2019**

Types of Government Work

Project

People/Social Services

Transactional

Regulatory

Resource Management

Marketing & Outreach

Inventory/Distribution

Policy

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Types of Government Work

Type of Work	Activities	Throughput (#)	Quality (%)
Projects	Construction, IT develop.	Projects completed	Timeliness, in-budget
People / Social Services	Case mgmt., welfare	Individuals served	Desired outcome, or proxy
Policy	Policies, rules, research	Policies recommended	Desired outcome rate
Regulatory	Inspection, enforcement	Inspections conducted	Compliance rate
Resource Management	Fleet, natural resources	Resources affected	Coverage, utilization rate
Transactional	Applications, licensing	Volume processed	Accuracy, reliability met
Inventory / Distribution	Retail, sales, warehouse	Revenue generated	Reliability standard met
Marketing / Outreach	Public health, economic	Impressions generated	Desired outcome rate

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Developing a QT/OE for GOMB…

Brainstorm as an agency. Schedule meeting with GOMB. → Meet to review / finalize ideas into the form. → Gather baseline data, complete the form. → GOMB reviews, enters QT/OE into portal. → Agency routinely inputs data. GOMB and agency monitor performance…

two-way deadlines, status updates, and follow-up throughout →

GOMB contact: *Rachel Stone, rachelstone@utah.gov*

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Go to **gomb.utah.gov**….

GOVERNOR'S OFFICE OF
MANAGEMENT AND BUDGET

OPERATIONAL EXCELLENCE ⌄   BUDGET ⌄   UTAH'S ECONOMY   POLICY & PLANNING ⌄   ABOUT US ⌄   NEWS   Q

RESOURCES

Click on the images below to access materials related to the SUCCESS Framework:

SUCCESS Fundamentals Brochure

SUCCESS Essential Practices for Leadership

QT/OE Description Template
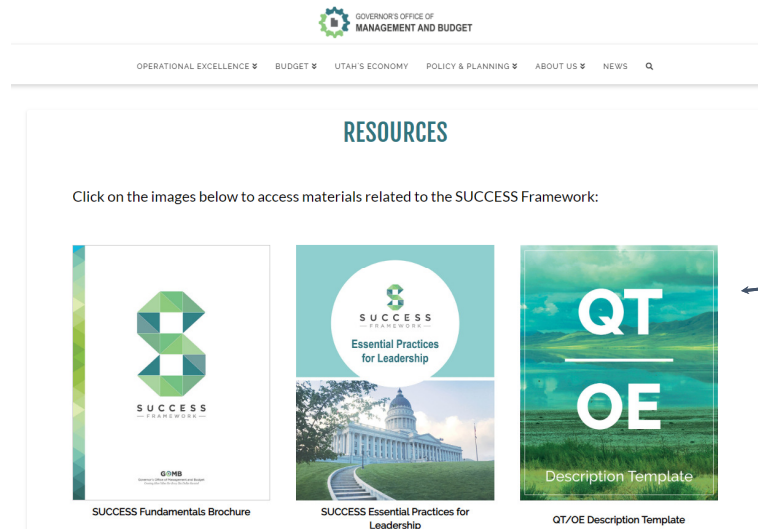
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Looking forward to working with you!

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